CLAIMS

1. A system for measuring a gradient in-vivo, the system comprising:
   at least two sensors collecting data in the same modality;
   a processor; and
   an external receiving unit.
2. The system according to claim 1, wherein the at least two sensors are separated by a distance.
3. The system according to claim 1, wherein the at least two sensors are configured for being immobilized in-vivo.
4. The system according to claim 1, wherein the at least two sensors are immobilized in an esophagus.
5. The system according to claim 1, wherein the at least two sensors are an integral part of a swallowable capsule.
6. The system according to claim 1, wherein the at least two sensors are attached to or are an integral part of an endoscope.
7. The system according to claim 1, wherein the at least two sensors are pH sensors.
8. The system according to claim 7, wherein the pH sensors are selected from a group comprising: pH sensitive electrodes, pH sensitive color indicators, and ISFET.
9. The system according to claim 1, wherein the at least two sensors are selected from a group comprising: pressure sensor, temperature sensor, image sensor, blood sensor, and oximetry sensor.
10. The system according to claim 1 comprising a transmitter.
11. A method for measuring an in-vivo gradient, the method comprising:
    inserting a first and second sensor in-vivo, the sensors separated by a distance D, the first and second sensor sensing the same type of data; and
    sampling output of the first sensor and the second sensor.
12. The method of claim 11 comprising processing the output.
13. The method according to claim 11, wherein the first and second sensors are pH sensors.
14. The method according to claim 11 comprising determining a velocity of flow based on the output.

15. The method according to claim 11 comprising inserting the first and second sensor into the esophagus.

16. The method according to claim 11 comprising diagnosing the presence or absence of GERD based on the output.

17. A system for measuring an in-vivo gradient comprising:
a sampling means for sampling output from a first and second in-vivo sensor, the sensors separated by a distance D;
a transmitting means for transmitting the output;
a processing means for processing the output; and
a presentation means for presenting the output.

18. A system for determining an in-vivo gradient, the system comprising:
a controller to:
accept a set of data from a plurality of in-vivo sensors;
compare the data received from each of the sensors; and
determine a fluid flow based on the data.

19. The system of claim 18, wherein the data is pH data.

20. The system of claim 18, wherein the data is from two in-vivo sensors separated by a distance.

21. The system of claim 18, wherein the controller is to determine a cross correlation between the data of the plurality of sensors.

22. The system of claim 18, wherein the controller is to determine a direction of fluid flow.

23. A method for determining an in-vivo gradient, the method comprising:
accepting a set of data from a plurality of in-vivo sensors;
comparing the data received from each of the sensors; and
determining a gradient based on the data.

24. The method of claim 23, wherein the data is pH data.

25. The method of claim 23, wherein the data is from two in-vivo sensors separated by a distance.

26. The method of claim 23, wherein the comparing is to determine a cross correlation between the data of the plurality of sensors.

27. The method of claim 23, wherein the comparing is to determine a direction of fluid flow.

28. A system comprising:

an in-vivo device comprising a plurality of sensors;

a controller to determine a gradient based on sampling of the sensors; and

an external receiver to receive data from the in-vivo device.

29. The system of claim 28, wherein in-vivo device comprises a transmitter.

30. The system of claim 28, wherein the sensors are pH sensors.

31. The system of claim 28, wherein the in-vivo device is configured for being immobilized in-vivo.

32. The system of claim 28, wherein the controller is within the in-vivo device.

33. An in-vivo device for measuring an in-vivo gradient, the device comprising:

at least two sensors for sensing the same type of data,

wherein the in-vivo device is capable of being immobilized in-vivo.

34. The device according to claim 33, wherein the first sensors are pH sensors.

35. The device according to claim 33, wherein the device is configured for being immobilized in an esophagus.

36. The device according to claim 33 comprising a controller, said controller to accept output from the sensors and to process said output.